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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/625,916	07/26/2000	Randy K. Roushall	10002969-1	8206

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EXAMINER

EL SHAMMAA, MARY A

ART UNIT	PAPER NUMBER
2881	

DATE MAILED: 04/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/625,916	ROUSHALL ET AL.
	Examiner	Art Unit
	Mary A. El-Shammaa	2881

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 02 February 2004.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-20 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-20 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 26 July 2000 is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
     1. Certified copies of the priority documents have been received.  
     2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
     3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>6-03-03</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Mason (5,712,480).

Regarding claims 1 and 14, Mason discloses in Figs. 2 and 12 a data acquisition system (22) and method comprising producing a plurality of data samples from a transient sequence and accumulating corresponding data samples across the transient sequence through two or more parallel accumulation paths (28, 30 and 214, 216 – see parallel paths in the figure) (Col. 1, Line 66 through Col. 2, Line 2; Col. 3, Line 60 through Col. 4, Line 2; Col. 4, Lines 8-17; Col. 7, Lines 49-53; Col. 8, Lines 21-24; Col. 9, Lines 14-16, 35-37, and 50-53; Col. 11, Lines 30-41; Col. 12, Lines 24-34).

Regarding claim 2, Mason discloses the system further comprising a sampler (66 – according to page 7, line 13 of the Applicant's specification, a high speed flash analog-to-digital converter is an example of a sampler) coupled to the accumulator and configured to produce a plurality of data samples from a transient sequence (Col. 1, Lines 59-63; Col. 4, Lines 14-17, 47-56; Col. 5, Lines 41-46; Col. 6, Lines 42-60; Col. 7, Lines 49-53; Col. 9, Lines 25-58; Col. 11, Lines 42-46).

Regarding claims 3 and 13, Mason discloses the sampler comprising an analog-to-digital converter (**66**) (Col. 1, Lines 59-63; Col. 4, Lines 14-17, 47-56; Col. 5, Lines 41-46; Col. 6, Lines 42-60; Col. 7, Lines 49-53; Col. 11, Lines 42-46).

Regarding claims 4, 5, 12, and 15-18, Mason discloses a controller coupled to the accumulator and configured to cycle the accumulation of data samples through each of the accumulation paths (Col. 3, Lines 49-57).

Regarding claim 6, Mason discloses the accumulation path comprising an adder (**296**) and a memory (**298**) (Col. 9, Lines 35-43).

Regarding claim 7, Mason discloses the memory comprising a dual port random access memory (**298**) (Col. 5, Lines 12-16, 35-38; Col. 7, Lines 7-11; Col. 9, Lines 37-45; Col. 11, Lines 11-16).

Regarding claims 8 and 9, Mason discloses each accumulation path, coupled in series, being configured to produce an output representative of the sum of two inputs (Col. 3, Line 60 through Col. 4, Line 20; Col. 4, Lines 44-63; Col. 5, Lines 22-24; Col. 9, Lines 14-16; Col. 10, Lines 1-5; Col. 11, Lines 42-54; Col. 12, Lines 24-38).

Regarding claim 10, Mason discloses the system further comprising an ion detector (**42**) (Col. 2, Lines 2-8; Col. 3, Lines 45-65; Col. 4, Lines 30-43).

Regarding claims 11, 19, and 20, Mason discloses a time-of-flight mass spectrometer (**10**) comprising an ion detector (**42**) configured to produce a transient sequence, a sampler (**66**) configured to produce a plurality of data samples from the transient sequence, and an accumulator (**294**) coupled to the sampler, comprising two or more accumulation paths and configured to accumulate corresponding data samples across the transient sequence through the

different accumulation paths (Col. 1, Line 66 through Col. 2, Line 27; Col. 3, Line 34 through Col. 4, Line 37; Col. 6, Lines 42-44; Col. 9, Lines 35-53; Col. 10, Lines 28-43; Col. 11, Lines 30-52; Col. 12, Lines 24-47).

*Response to Arguments*

Applicant's arguments filed February 2, 2004 have been fully considered but they are not persuasive. The Examiner would like to draw Applicant's attention to Fig. 12. In Fig. 12 it is clearly shown that the accumulator (294) has two separate, parallel paths (214, 216 – also labeled 28, 30) for accumulating data. Applicant argues that Mason discloses the use of a single accumulator instead of interleaving of accumulators, however, no where in the claims is the use of more than one accumulator or the interleaving of accumulators mentioned. Furthermore, Mason clearly shows in Fig. 12 two separate, parallel paths, each of which go to a separate adder (296) and random access memory (298) within the accumulator (294).

*Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. (5,777,326 – pertaining to a method and apparatus for extending the dynamic range of a data acquisition device; 5,027,072 – pertaining to a data acquisition method used in spectroscopy; 3,937,955 – pertaining to a spectrometer).

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary A. El-Shammaa whose telephone number is 571.272.2469. The examiner can normally be reached on M-F (8:30am-5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Lee can be reached on 571.272.2477. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MAE  
April 19, 2004

  
NIKITA WELLS  
PRIMARY EXAMINER

04/19/04